

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 73.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007954**Date Inspected:** 22-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1800**Contractor:** HoChang, Korea**Location:** Unyang, Korea**CWI Name:** Sang Ho Kwak**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Pier E2 bearing and Shear key**Summary of Items Observed:**

The following report is based on METS observations at HoChang Machinery Industries (HCMI). Current work: Casting, forging and machining.

On this date the Caltrans Quality Assurance (QA) inspector, Dong J. Shin arrived at HoChang Machinery Industries (HCMI) located at Unyang, Korea and DooSan Heavy Industries(DHIC) located at Changwon, Korea. The Purpose of this trip was to observe quality control during fabrication and process of following items.

Samjeon NDT technician Mr. KH. Lee performed MT on Spherical Ring after final machining and prior to SS overlay welding. QA inspector checked following items prior to testing: Lifting power, pie gauge magnetic field strength and calibration date.

Forging

1. Bearing Bottom Housing (B1-07/F07302-010): Transfer to KPC for final machining.
2. Bearing Bottom Housing (B2-07/F07302-020): Start final machining.
3. Bearing Bottom Housing (B3-07/F07302-030): Transfer to KPC for final machining.
4. Bearing Bottom Housing (B4-07/F07302-040): Transfer to KPC for final machining.
5. Spherical Ring (S1-07/F07302-050): Completed pre machining for SS overlay welding.
6. Spherical Ring (S2-07/F07302-060): Completed pre machining for SS overlay welding.
7. Spherical Ring (S3-07/F07302-070): Completed pre machining for SS overlay welding.
8. Spherical Ring (S4-07/F07302-080): Completed pre machining for SS overlay welding.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

9. Solid Shaft (B1-02/F07302-090): Completed pre machining for SS overlay welding.
10. Solid Shaft (B2-02/F07302-100): Completed pre machining for SS overlay welding.
11. Solid Shaft (B3-02/F07302-110): Completed pre machining for SS overlay welding.
12. Solid Shaft (B4-02/F07302-120): Completed pre machining for SS overlay welding.

- F number is DooSan Production Number.
- B number is drawing Number.

Casting

On this date the Caltrans Quality Assurance (QA) inspector, Dong J. Shin arrived at HoChang Machinery Industries (HCMI) located at Unyang, Korea and DooSan Heavy Industries(DHIC) located at Changwon, Korea. The Purpose of this trip was to observe quality control during fabrication and process of following items.

DHIC NDT technician Mr. KS. Lee (UT) and Mr. SD. Lee performed MT and UT on B1-06, B2-06 (Bearing Top Housings), S1-03 (Shear Key Housing) and S4-01 (Stub)

QA inspector checked following items prior to testing: Lifting power, pie gauge magnetic field strength, and calibration date. UT: Calibration date, DAC Curve, transducer size and frequency.

Transducer Used: Straight Beam: Dia, 24mm, 2MHz, Angle Beam: 20 x 22mm, 1MHz, 45°, Dual element straight beam: 6 x 20mm, 4MHz and Miniature angle: 8 x 9mm, 2 MHz 45°.

1. Bearing Top Housing (B1-06, C07039-010): Completed NDT after repair welding.
2. Bearing Top Housing (B2-06, C07039-020): Start final NDT.
3. Bearing Top Housing (B3-06, C07039-030): Transfer to KPC for final machining.
4. Bearing Top Housing (B4-06, C07039-040): Transfer to KPC for final machining.
5. Bearing Hold Down Assembly (B1-01-1, C07039-050): Continue final machining.
6. Bearing Hold Down Assembly (B1-01-2, C07039-060): Continue final machining.
7. Bearing Hold Down Assembly (B2-01-1, C07039-070): Continue final machining.
8. Bearing Hold Down Assembly (B2-01-2, C07039-080): Continue final machining.
9. Bearing Hold Down Assembly (B3-01-1, C07039-170): Continue final machining.
10. Bearing Hold Down Assembly (B3-01-2, C07039-180): Continue final machining.
11. Bearing Hold Down Assembly (B4-01-1, C07039-190): Continue final machining.
12. Bearing Hold Down Assembly (B4-01-2, C07039-200): Continue final machining.
13. Shear Key Stub (S1-01, C07039-090): Continue final machining.
14. Shear Key Stub (S2-01, C07039-100): Transfer to KPC for final machining.
15. Shear Key Stub (S3-01, C07039-110): Transfer to KPC for final machining.
16. Shear Key Stub (S4-01, C07039-120): Start final NDT.
17. Shear key Housing (S1-03, C07039-130): Start final NDT.
18. Shear key Housing (S2-03, C07039-140): Transfer to KPC for final machining.
19. Shear key Housing (S3-03, C07039-150): Completed NDT after repair welding.
20. Shear key Housing (S4-03, C07039-160): Completed NDT after repair welding.

- * S and B number is drawing number.
- * C number is DSHI ID number.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

*Discuss with Mr. S. H. Kwak regarding general project schedule.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Shin,DJ

Quality Assurance Inspector

Reviewed By: Lanz,Joe

QA Reviewer